Radiological Control

Objectives

- Understand the Relationship Between the Requirements of DOE 5480.19 and DOE/EH-0256T
- Understand Radiation Protection and Contamination Control Work Activity Requirements of Radiation Protection Personnel Outlined in DOE 5480.19
- Be Familiar with the Fundamentals of Radiological Control Including Such Terms as Exposure, Contamination and Dosimetry

Radiological Control

Overview

- RADCON Minimizes Personnel Exposure and Prevents the Spread of Contamination
- RADCON is Integral to Safe, Efficient Operations and Complements CONOPS

Radiological Control

Overview

DOE/EH-O256T Article 111 States:

There should not be any occupational exposure without the expectation of an overall benefit from the activity

Article 111 is achieved through:

- ALARA,
- OWNERSHIP, and
- EXCELLENCE

Radiological Control

Overview

ALARA - As Low As Reasonably Achievable, Minimize Exposure by Following Sound Practices

OWNERSHIP - Achieving ALARA is an Individual Responsibility

EXCELLENCE - Commitment to Continuous Improvement

Radiological Control

Leadership In Radiological Control

- Qualified Personnel
- Approved Procedures
- Active and Informed Management Involvement
- Work-space Communication, Instruction and Inspection

Radiological Control

Senior Management Commitment

- Establish Policy Communicating High Performance Standards, Goals, and Performance Measures
- Solicit Feedback From All Levels
- Allocate Appropriate Resources
- Hold All Workers and Supervisors Accountable
- Encourage Continuous Improvement
- Develop and Implement a RADCON Performance Indicator Program

Radiological Control

Minimization of Internal Exposure

- Engineered Controls
- Administrative Controls

  Stay Times, Air Sampling
- Personal Respiratory Protection

  Positive Pressure; Worker Safety, Comfort, and Efficiency
- Written Authorization of Justified Internal Exposure

Radiological Control

External Dosimetry

- Issued to Qualified Personnel Expected to Receive External Whole Body Dose > 100Mrem Occupational Exposure
- Worn on the Chest, Only on-site, “One at a Time”
- Radiological Work Prohibited Without Dosimetry
- Exit and Inform Immediately if Dosimetry is Lost, Damaged, or Contaminated

Radiological Control

Personnel Contamination Control

- Frisk When Exiting, Use an Automatic Unit if Possible
- Promptly Decontaminate When Contamination is Detected

Radiological Control

Contamination Control Levels

- Promptly Decontaminate or Post IAW Article 235
- If Unable to Decontaminate, Apply Fixative Coatings
- Survey Fixed Contamination Areas to Detect Contamination that May Become Removable
- Maintain an Inventory of Fixed Contamination Areas
- Post Special Warnings Where Soil Contamination Is Present
- Keep Postings Legible

Radiological Control

Radiological Control Organization

- Provide Consistent Support to Line Management
- Adhere to the Site-Specific RADCON Manual
- Line Management Prioritizes
- RADCON Manager is accountable for Program

Radiological Control

RCT - Worker Relationship

- Qualified Radiation Workers Seek RCT Advice When Needed
- RCTs, RCT Supervisors, and Workers (Through Supervisor) Have Stop Work Authority
- The Actions or Presence of RCTs Does Not Absolve Workers from RADCON Responsibilities

Radiological Control

Worker Attitude

Have an Understanding and Proper Respect for Radiation

- RADCON is Part of Everyone's Daily Duties
- Training
- Constant Improvement
- Mutual Radiological Controls and Operations Cooperation and Support

Radiological Control

Worker Responsibilities

- Training
- Recognize Actions Directly Affect Exposure Contamination Control and RADCON Environment
- OBEY
  - Instructions and Procedures
  - Evacuate and Stop Work Orders Promptly